Exhibit F

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Rose
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Applicants:	John B. Adrain
Serial No.:	08/677,100 Art Unit: 2615
Filing Date:	July 9, 1996
Title:	"FACILITY MONITORING SYSTEM WITH IMAGE MEMORY AND CORRELATION"
Examiner:	Howard W. Britton
Docket No.:	29520

AMENDMENT "A"
(IN RESPONSE TO PAPER NO. 3)

Asst. Commissioner for Patents
BOX NON-FEE AMENDMENTS
Washington, D.C. 20231

Sir:

This amendment is filed in response to the Office action dated January 13, 1997. Please amend the above-identified application in the following manner.

IN THE CLAIMS:

Please cancel claims 7, 9, 11, 13, 24, 27 and 28 without prejudice.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on the date indicated below.

Michael W. Garvey
Name of Attorney for Applicant(s)

4-14-97
Date

Signature of Attorney

Please amend claims 1 and 8 as follows:

Claim 1, line 2, after the first occurrence of "a", please insert therefor --movably mounted--.

Claim 8, line 1, please delete "7" and insert therefor --1--

Please amend claims 15, 22 and 23 as follows:

SUB B2

15. (amended) [a monitoring system according to claim 1 wherein the reference memory is adapted for storing image data] A monitoring system comprising:

A1 Comp

a movably mounted camera adapted for receiving images of a space to be monitored;

an interpreter for receiving image data from the camera;

a reference memory for storing reference image data for plural images and [the] a comparator is adapted for comparing image data from the interpreter to image data for the plural images from the reference memory according to selected comparison criteria; and

an output interface for reporting results of the image data comparisons performed by the comparator.

SUB B3

A2 Cont

22. (amended) A method of monitoring a space comprising the steps of:

receiving a first set of image data from the space representing plural images;

identifying and selecting a portion of the information to be stored according to analysis and learn criteria;

storing the selected information;

receiving a second set of image data from the space;

identifying and selecting a portion of the second set of image data to be analyzed according to the analysis criteria;

comparing the selected portions of the sets of image data to each other so as to compare the second set of image data to the plural images of the first set and determine a correlation of the images; and

indicating whether the correlation of the images meets selected comparison criteria.

~~23~~ 13. (amended) A method according to claim ~~22~~ 12 further comprising the step of reporting results of the comparison step according to utilization criteria and augmenting the reporting with identifying information.

Please add new claims 33-38 as follows:

9. (new) A system according to claim 1 wherein the interpreter selects images according to analysis criteria so that only the selected images are input to the comparator for comparison to reference images.

10. (new) A system according to claim 9 wherein the selected images represent only portions of a larger image.

35. (new) A system according to claim 21 wherein the comparator compares the image data from each zone to a different reference image.

36. (new) A method according to claim 30 wherein the step of storing changes from the baseline data is performed according to learn criteria and substantially coincident with comparisons being performed by the comparator.

37. (new) A method according to claim 36, wherein the baseline data are changed based on results of a comparison.

20. (new) A method according to claim 12 wherein the comparison of image data is repeated to distinguish between movements based on a series of sequential images.

REMARKS

Claims 1-32 have been rejected as obvious over Pomerleau in view of Sadovnik, Coutta, Urquhart, and Araki.

Claim 1 has been amended to more clearly distinguish the invention over the prior art, incorporating the substance of claim 7. The cited art does not show a moving or movable camera as recited in claims 1, 8, and 16. Although it is well known to mount a camera on a movable support or movably mount a camera on a stationary support, there is no suggestion in the art to do so in combination with the system shown in Pomerleau. Pomerleau compares two images of the same space and creates a difference image. If the camera moves between the times when the two images are recorded, nearly every pixel in the difference image would indicate a change condition. Pomerleau does not teach that the system would know which image to use as a reference when the camera monitors a different space.

The present invention, however, specifically provides that the camera can move, for example, being mounted on a vehicle. As the space being monitored changes, the interpreter selects certain parts of the image for comparison and disregards other parts of the image according to analysis criteria from the programmer. For example, a system seeking license plates would only

make comparisons when a license plate is discovered. The comparison could be limited to the license plate without regard for surrounding images. New claims 33 and 34 have been added to further distinguish over the cited art.

Claim 15 has been rewritten in independent form. The cited art does not show a comparator that uses different reference images under different circumstances according to selected comparison criteria as recited in claims 15-17. For example, monitoring of a bank vault compares facial images during the day, but uses the unoccupied vault as the reference at night. The references do not show repeated comparisons used to sense types of movement in the monitored space as recited in new claim 38.

The cited art does not divide the image data into zones and use different comparison criteria for the different zones according to claims 18-21 and 31-32. Pomerleau merely applies different weights to different parts of the difference image. Furthermore, the cited art does not make sequential comparisons in the zones as recited in claims 20 and 32. Pomerleau makes a single comparison of the entire image. The cited art does not use different reference images for the different zones according to claim 35. Pomerleau uses a single reference image. The cited art does not show comparison of the sensed images to plural stored images as recited in claim 22.

The references do not show the step of augmenting the reporting of comparison results with identifying information as recited in claim 23.

The references do not show an interpreter that periodically stores reference images in memory according to learn criteria as recited in claim 14. The references do not show a system that stores changes from the baseline data as recited in claims 30 and new claim 36. The references do not show baseline data that are changed based on results of a comparison as recited in new claim 37. For example, the image of a new face can be automatically stored in the reference memory when it appears in the monitored space with a previously stored face image. Thus, the invention can learn by updating the reference images during operation according to learn criteria. Pomerleau requires the user to teach the system by recording reference images.

Claims 7, 9, 11, 13, 24, 27 and 28 have been cancelled.

All of the issues raised by the Examiner have been resolved. Accordingly, applicant respectfully requests reconsideration and withdrawal of the rejection.

If there are any additional fees resulting from this communication, please charge all uncovered fees to our Deposit Account No. 16-0820, our Order No. 29520.

Respectfully submitted,

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April 14, 1997